

TWO NEW SPECIES OF NORTH AMERICAN ARADIDÆ.

[Hemiptera, Aradidæ.]

BY O. HEIDEMANN.

Nannium pusio, new species.

Body small, elongate-ovate, color dark brown. Head as long as broad with two short ridges at its posterior part; apical process rather short, feebly emarginated at tip, extending hardly half way to the first antennal joint; antenniferous processes prominent, sharply pointed; postocular part of head rounded, with a small tooth at each side; antennæ about as long as head and thorax united; basal joint abruptly thickened towards apex and somewhat bent outwardly; second joint shorter and less thick; third the longest and cylindrical; terminal joint pyriform, as long and thick as basal one, with short, whitish bristles at tip; rostrum reaching base of head.

FIG. 3.—*Nannium pusio*.

Surface of pronotum rather coarsely granulated, at disk, anteriorly, two large tubercles and a transverse trisinate ridge at the posterior part of pronotum; a small tooth on each side of anterior margin just below the head; the anterior margin much narrower than the posterior one; both margins nearly truncate; the anterior lateral marginal angles prominently lobiform and somewhat reflexed, the posterior part of lateral margins broadly rounded, the edge finely serrate. Scutellum triangular, with a sharp ridge down the middle and two small, transverse ones at the base forming a T-like figure. Corium extending a little beyond the middle of second abdominal segment; the surface finely wrinkled, with the nerves prominently raised; the inner margins of corium arcuate-emarginate, apex obtuse. Membrane dark brown, except the basal portion, which is pale. The connexivum brown, with the posterior margins of the segments lighter and a little thickened. The sides of abdomen rounded in the female; subparallel in the male, which has the outer apical angles of the last four abdominal segments quite prominent. Genital lobes of the female triangular; those in the male are somewhat narrow at base and oblique truncate at apex. Legs short, finely granulate, femora dark brown with the knees pale; tibia dark brown towards the tip.

Length, female, 3.4 mm., width across abdomen 1.2 mm.; male, 3.2 mm., width 1 mm.

Two females and one male, Cincinnati, Ohio (C. Dury).

Type—No. 12710, U. S. National Museum.

This species may rightly be referred to the genus *Nannium* (sub-family Brachyrhynchinæ), with which it has the prin-

cial characters in common, namely, the spiracles of the posterior abdominal segments are placed near the lateral margins. The genus *Nannium* was originally described by Dr. E. Bergroth,* who based his genus on three South American species. Later on, another species has been described by Dr. G. C. Champion† from Guatemala, Central America. Now it is interesting to add also a North American species, found as far north as Cincinnati, Ohio, to this genus *Nannium*, hitherto only known from tropical and semi-tropical regions.

This neat little species resembles *Nannium parvum* Bergr., but it appears somewhat stouter and the segments of abdomen are equally long in the middle, while in the other species the fifth abdominal segment is decidedly longer than the preceding segments.

I am indebted to Dr. C. Dury for kindly presenting me with three specimens of this new species, which he had found by sifting earth from near an old decaying tree-stump in the vicinity of Cincinnati, Ohio.

Aradus borealis, new species.

Body broad, ovate, dark brown and finely granulate. Head closely set into the thorax, hardly longer than broad, two deep impressions



FIG. 4.—*Aradus borealis*.

at basal part, a longitudinal ridge at the inner side of each eye, with a small tubercle in front; apical process of head broad at base, considerably tapering towards the tip, extending a little beyond the base of second antennal joint; antenniferous processes prominent, straight at the outside and very acute at the tip, reaching near to the apex at the basal joint of the antennae. Eyes globular, protruding sideways somewhat beyond the anterior margin of pronotum. Antennae stout, finely granulated, as long as head and thorax taken together; basal joint extremely short; second joint one-third longer than the two apical ones united, gradually narrowing toward the base and slightly bent outwardly; third joint cylindrical, longer than the terminal one, which is thinner and whitish at tip. Rostrum touches the mesosternum; first joint longest, extending to the base of head; the second joint reaches the

*Diagnoses of Some New Aradidae, by E. Bergroth (The Entomologist Monthly Magazine, vol. xxxiv, p. 100, 1898).

†Biologia Centrali-Americana, p. 84, 1897-1901.

coxae of front legs. Pronotum finely granulated and transversely wrinkled, nearly twice as broad as long; anterior margin half the width of the posterior margin, the latter strongly sinuate in the middle; the lateral margins abruptly reflexed, feebly rounded posteriorly, then gradually narrowing toward the anterior margin; at the disk of pronotum six longitudinal, strong ridges of equal distance, the two middle ones reaching the anterior margin; those at the sides are abbreviated, the much shorter ones near the lateral margins curved inwardly. Scutellum cordate, nearly twice as long as broad at base, with a strong upturned edge. Hemelytra rather long, the membrane extending to the last genital segment, and the corium reaches the apical margin of the fourth abdominal segment; the exteriorly recurved flaps at base of corium not very dilated. Abdomen brownish, with a sharp carina in the middle; fifth abdominal segment trisinate at apex, in the middle subequal in length to the sixth; first genital segment twice as long as the second; genital lobes large, obliquely truncate, and considerably apart.

Length, female, 7.4 mm.; width across abdomen 3 mm.

Two females, Mount Washington, New Hampshire, 1874 (Blanchard); Marquette, Michigan, June 26 (Hubbard and Schwarz).

Type—No. 12711, U. S. National Museum.

This species belongs to a group of the Aradidae which have short and very stout antennae. In general appearance it has a strong resemblance to the species *Aradus niger* Stål. It differs, however, in having a larger body and the genital lobes are quite differently shaped. The male is still unknown.

Dr. Howard asked if any aradids were known to bite warm-blooded animals, Messrs. Schwarz and Heidemann saying that none were known with this habit, Mr. Heidemann adding that many were known to feed on fungi.

Mr. Uhler said that in the spring of the year he has frequently found great numbers of *Neuroctenus simplex* Uhler on newly-cut pine, not, however, feeding. He thought that they were in fungi as a good hiding place, and that often he had found aradids under the scales of pines sucking moisture, where he could not see the slightest trace of fungus.

—Dr. Howard then read a paper entitled "Notes on a Flying Trip to Russia," exhibiting many photographs to illustrate various places visited, and commenting on the collections of insects seen.